

IN THE CLAIMS:

The following claims will replace all prior versions of claims in this application.

1. (Original) A multilayer system for the extreme ultraviolet wavelength range comprising:

alternating layers of materials with different refractive indices or absorption coefficients, and a protective layer system having different material than said alternating layers and being disposed on top of said alternating layers, wherein the protective layer system is a) iridium, carbon covered by iridium, molybdenum carbide covered by iridium, aluminium oxide covered by iridium, titanium nitride covered by iridium, or titanium dioxide covered by iridium, or b) a mixture, an alloy or a compound of iridium and a further substance, or c) a mixture of silicon nitride and a further substance.

2. (Original) A multilayer system for the extreme ultraviolet wavelength range comprising:

alternating layers of a) molybdenum and silicon or b) molybdenum and beryllium, and a protective layer system disposed on said alternating layers, wherein the protective layer systems is a) iridium, carbon covered by iridium; molybdenum carbide covered by iridium; aluminium oxide covered by iridium; titanium nitride covered by iridium; titanium dioxide covered by iridium; a mixture, an alloy or a compound of iridium and a further substance, or b) a mixture of silicon nitride and a further substance.

3. (Original) A multilayer system for the extreme ultraviolet wavelength range comprising:

alternating layers of materials with different refractive indices or absorption coefficients with a protective layer system, wherein the protective layer system consists of at least iridium.

4. (Currently Amended) A multilayer system for the extreme ultraviolet wavelength range comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least one interface of two alternating layers shows implanted carbon.

5-28 Canceled

29. (New) A multilayer system for the extreme ultraviolet wavelength range, comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least one interface of two alternating layers shows carbon.

30. (New) A multilayer system for the extreme ultraviolet wavelength range, comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least one interface of two alternating layers shows Mo₂C.

31. (New) A multilayer system for the extreme ultraviolet wavelength range, comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least one interface of two alternating layers shows SiC.

32. (New) A multilayer system for the extreme ultraviolet wavelength range, comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least a first interface of two alternating layers shows Mo₂C and at least a second interface of two alternating layers shows SiC.

33. (New) A multilayer system for the extreme ultraviolet wavelength range, comprising:

alternating layers of materials with different refractive indices or absorption coefficients, wherein at least one interface of two alternating layers shows Si₃Ni₄.